

Claims

What is claimed is:

1. A resilient surface covering or surface covering component comprising:
a wear layer adhered to a foamed layer, and a melt-processed layer adhered to said foamed layer, said melt-processed layer exhibiting a toughness value of at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer.
2. The resilient surface covering or surface covering component of claim 1, wherein the melt-processed layer includes a polymeric blend.
3. The resilient surface covering or surface covering component of claim 2, the melt-processed layer including from about 10% to about 45% by weight of the polymeric blend.
4. The resilient surface covering or surface covering component of claim 2, the polymeric blend including a polyvinyl chloride polymer and at least one compatible polymer.
5. The resilient surface covering or surface covering component of claim 4, wherein the compatible polymer is molecularly soluble with said polyvinyl chloride polymer.

6. The resilient surface covering or surface covering component of claim 4, the compatible polymer being selected from the group consisting of an acrylonitrile, a urethane, an ethylene-vinyl-acetate, a chlorinated polyethylene, a polyester, and a co-polymer thereof.
7. The resilient surface covering or surface covering component of claim 4, the polymeric blend including about 10% to about 40% by weight of the compatible polymer.
8. The resilient surface covering or surface covering component of claim 1, further comprising a substrate adhered to the melt-processed layer.
9. The resilient surface covering or surface covering component of claim 1, the melt-processed layer including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
10. The resilient surface covering or surface covering component of claim 2, the polymeric blend including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
11. A resilient surface covering or surface covering component comprising:

a melt-processed layer adhered to a substrate, said melt-processed layer exhibiting a toughness value of at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer.

12. The resilient surface covering or surface covering component of claim 11, wherein the surface covering or surface covering component is a floor covering or floor covering component.
13. The resilient surface covering or surface covering component of claim 11, wherein the melt-processed layer includes a polymeric blend.
14. The resilient surface covering or surface covering component of claim 13, the melt-processed layer including from about 10% to about 45% by weight of the polymeric blend.
15. The resilient surface covering or surface covering component of claim 13, the polymeric blend including a polyvinyl chloride polymer and at least one compatible polymer.
16. The resilient surface covering or surface covering component of claim 15, the compatible polymer being selected from the group consisting of an acrylonitrile, a urethane, an ethylene-vinyl-acetate, a chlorinated polyethylene, a polyester, and a co-polymer thereof.

17. The resilient surface covering or surface covering component of claim 15, the polymeric blend including about 10% to about 40% by weight of the compatible polymer.
18. The resilient surface covering or surface covering component of claim 11, the substrate being selected from the group consisting of solid filled polymeric layer, solid unfilled polymeric layer, solid filled polymeric composite, solid unfilled polymeric composite, solid layer composite including a fibrous web saturated with polymeric binder, porous fibrous layers, and non-woven fabrics.
19. The resilient surface covering or surface covering component of claim 11, further comprising at least one additional layer adhered to the melt-processed layer, said additional layer being selected from the group consisting of a foamed layer, a wear layer, a pattern layer and a top coat layer.
20. The resilient surface covering or surface covering component of claim 11, the melt-processed layer including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
21. The resilient surface covering or surface covering component of claim 13, the polymeric blend including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
22. A resilient surface covering or surface covering component comprising:

a melt-processed layer attached to a layer selected from the group consisting of a wear layer, a foamed layer, a pattern layer, a substrate and a top coat layer, said melt-processed layer exhibiting a toughness value of at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer.

23. The resilient surface covering or surface covering component of claim 22, wherein the melt-processed layer includes a polymeric blend.
24. The resilient surface covering or surface covering component of claim 23, the melt-processed layer including from about 10% to about 45% by weight of the polymeric blend.
25. The resilient surface covering or surface covering component of claim 23, the polymeric blend including a polyvinyl chloride polymer and at least one compatible polymer.
26. The resilient surface covering or surface covering component of claim 25, the compatible polymer being selected from the group consisting of an acrylonitrile, a urethane, an ethylene-vinyl-acetate, a chlorinated polyethylene, a polyester, and a copolymer thereof.
27. The resilient surface covering or surface covering component of claim 25, the polymeric blend including about 10% to about 40% by weight of the compatible polymer.

28. The resilient surface covering or surface covering component of claim 22, the melt-processed layer including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
29. The resilient surface covering or surface covering component of claim 23, the polymeric blend including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
30. A surface covering comprising:
a melt-processed layer, the surface covering exhibiting an impact resistance value at least 30% greater than an impact resistance value exhibited by a control surface covering including a control melt-processed PVC layer.
31. The surface covering of claim 30, wherein the surface covering is a floor covering.
32. The surface covering of claim 30, wherein the melt-processed layer includes a polymeric blend.
33. The surface covering of claim 32, the melt-processed layer including from about 10% to about 45% by weight of the polymeric blend.
34. The surface covering of claim 32, the polymeric blend including polyvinyl chloride and at least one compatible polymer.

35. The surface covering of claim 34, the compatible polymer being selected from the group consisting of an acrylonitrile, a urethane, an ethylene-vinyl-acetate, a chlorinated polyethylene, a polyester, and a co-polymer thereof.
36. The surface covering of claim 34, the polymeric blend including about 10% to about 40% by weight of the compatible polymer.
37. The surface covering of claim 30, the melt-processed layer including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, a nitrile, a styrene-butadiene, and a co-polymer thereof.
38. The surface covering of claim 32, the polymeric blend including at least one polymer selected from the group consisting of an ethylene-vinyl-acetate, an ethylene-propylene-diene, a polyethylene-propylene, a urethane, a polyester, an acrylonitrile, a styrene-butadiene, and a co-polymer thereof.
39. The surface covering of claim 30, further comprising a wear layer and a top coat layer.
40. The surface covering of claim 30, wherein the surface covering further comprises a foam layer.

41. The surface covering component of claim 30, wherein the surface covering further comprises a substrate.
42. The surface covering of claim 41, wherein the substrate comprises a beater-saturated felt.
43. A surface covering or surface covering component comprising:
a melt-processed layer including a blend of polyvinyl chloride resin and nitrile rubber.
44. The surface covering or surface covering component of claim 43, the melt-processed layer including from about 10% to about 45% by weight of the blend.
45. The surface covering or surface covering component of claim 43, the blend including from about 10% to about 40% by weight of the nitrile rubber.
46. The surface covering or surface covering component of claim 43, the melt-processed layer exhibiting a toughness value at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer.
47. A surface covering or surface covering component comprising:

a multi-layered component including a wear layer adhered to a foam layer adhered to a melt-processed layer including a blend of polyvinyl chloride and nitrile rubber.

48. The surface covering or surface covering component of claim 47, the melt-processed layer including from about 10% to about 45% by weight of the blend.
49. The surface covering or surface covering component of claim 47, the blend including from about 10% to about 40% by weight of the nitrile rubber.
50. The surface covering or surface covering component of claim 47, the melt-processed layer exhibiting a toughness value at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer.
51. The surface covering of claim 47, the multi-layered component exhibiting an impact resistance value at least 30% greater than an impact resistance value exhibited by a control sheet including a control melt-processed PVC layer.
52. A surface covering comprising:
a melt-processed layer exhibiting a toughness value of at least 100% greater than a toughness value exhibited by a control melt-processed PVC layer, the surface covering exhibiting an impact resistance value at least 30% greater than an impact resistance value exhibited by a control surface covering.

53. The surface covering of claim 52, the melt-processed layer including a blend of polyvinyl chloride and nitrile rubber.
54. The surface covering of claim 52, wherein the surface covering is a floor covering.